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Arg Glu Val Lys Asn Glu Val Ser Leu Val Ala Glu Gly Phe Leu Pro
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      Gln Ala Ala Phe Gln Met Gln Met His Glu Ser Ala Leu Pro Trp Asp
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      Asp His Arg Pro Gln Val Thr Trp Arg Gly Asp Gly Gln Phe Phe Ala
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      Val Ser Val Val Cys Pro Glu Thr Gly Ala Arg Lys Val Arg Val Trp
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      Asn Arg Glu Phe Ala Leu Gln Ser Thr Ser Glu Pro Val Ala Gly Leu
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      Gly Pro Ala Leu Ala Trp Lys Pro Ser Gly Ser Leu Ile Ala Ser Thr
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      Gln Asp Lys Pro Asn Gln Gln Asp Ile Val Phe Phe Glu Lys Asn Gly
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      Leu Leu His Gly His Phe Thr Leu Pro Phe Leu Lys Asp Glu Val Lys
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      Val Asn Asp Leu Leu Trp Asn Ala Asp Ser Ser Val Leu Ala Val Arg
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      Leu Glu Asp Leu Gln Arg Glu Lys Ser Ser Ile Pro Lys Thr Cys Val
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      Gln Leu Trp Thr Val Gly Asn Tyr His Trp Tyr Leu Lys Gln Ser Leu
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      Ser Phe Ser Thr Cys Gly Lys Ser Lys Ile Val Ser Leu Met Trp Asp
                             340                       345                       350

      Pro Val Thr Pro Tyr Arg Leu His Val Leu Cys Gln Gly Trp His Tyr
                             355                       360                       365

      Leu Ala Tyr Asp Trp His Trp Thr Thr Asp Arg Ser Val Gly Asp Asn
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      Ser Ser Asp Leu Ser Asn Val Ala Val Ile Asp Gly Asn Arg Val Leu
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Gln Leu Leu Phe Pro His Pro Val Asn Gln Val Thr Phe Leu Ala His
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Pro Gln Lys Ser Asn Asp Leu Ala Val Leu Asp Ala Ser Asn Gln Ile
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Ser Val Tyr Lys Cys Gly Asp Cys Pro Ser Ala Asp Pro Thr Val Lys
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Leu Gly Ala Val Gly Gly Ser Gly Phe Lys Val Cys Leu Arg Thr Pro
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His Leu Glu Lys Arg Tyr Lys Ile Gln Phe Glu Asn Asn Glu Asp Gln
              485               490               495

Asp Val Asn Pro Leu Lys Leu Gly Leu Leu Thr Trp Ile Glu Glu Asp
              500               505               510

Val Phe Leu Ala Val Ser His Ser Glu Phe Ser Pro Arg Ser Val Ile
          515               520               525

His His Leu Thr Ala Ala Ser Ser Glu Met Asp Glu Glu His Gly Gln
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Leu Asn Val Ser Ser Ser Ala Ala Val Asp Gly Val Ile Ile Ser Leu
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Cys Cys Asn Ser Lys Thr Lys Ser Val Val Leu Gln Leu Ala Asp Gly
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Gln Ile Phe Lys Tyr Leu Trp Glu Ser Pro Ser Leu Ala Ile Lys Pro
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Trp Lys Asn Ser Gly Gly Phe Pro Val Arg Phe Pro Tyr Pro Cys Thr
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Gln Thr Glu Leu Ala Met Ile Gly Glu Glu Glu Cys Val Leu Gly Leu
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Thr Asp Arg Cys Arg Phe Phe Ile Asn Asp Ile Glu Val Ala Ser Asn
625               630               635               640

Ile Thr Ser Phe Ala Val Tyr Asp Glu Phe Leu Leu Leu Thr Thr His
              645               650               655

Ser His Thr Cys Gln Cys Phe Cys Leu Arg Asp Ala Ser Phe Lys Thr
          660               665               670

Leu Gln Ala Gly Leu Ser Ser Asn His Val Ser His Gly Glu Val Leu
          675               680               685

Arg Lys Val Glu Arg Gly Ser Arg Ile Val Thr Val Val Pro Gln Asp
      690               695               700

Thr Lys Leu Val Leu Gln Met Pro Arg Gly Asn Leu Glu Val Val His
705               710               715               720

Page 22

His Arg Ala Leu Val Leu Ala Gln Ile Arg Lys Trp Leu Asp Lys Leu
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Met Phe Lys Glu Ala Phe Glu Cys Met Arg Lys Leu Arg Ile Asn Leu
              740           745               750

Asn Pro Ile Tyr Asp His Asn Pro Lys Val Phe Leu Gly Asn Val Glu
              755           760               765

Thr Phe Ile Lys Gln Ile Asp Ser Val Asn His Ile Asn Leu Phe Phe
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785           790               795                   800

Val Thr Ser Ser Val Tyr Leu Ser Arg Asp Pro Asp Gly Asn Lys Ile
              805               810               815

Asp Leu Val Cys Asp Ala Met Arg Ala Val Met Glu Ser Ile Asn Pro
              820           825               830

His Lys Tyr Cys Leu Ser Ile Leu Thr Ser His Val Lys Lys Thr Thr
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Pro Glu Leu Glu Ile Val Leu Gln Lys Val His Glu Leu Gln Gly Asn
    850               855               860

Ala Pro Ser Asp Pro Asp Ala Val Ser Ala Glu Glu Ala Leu Lys Tyr
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Leu Leu His Leu Val Asp Val Asn Glu Leu Tyr Asp His Ser Leu Gly
              885               890               895

Thr Tyr Asp Phe Asp Leu Val Leu Met Val Ala Glu Lys Ser Gln Lys
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Asp Pro Lys Glu Tyr Leu Pro Phe Leu Asn Thr Leu Lys Lys Met Glu
              915               920               925

Thr Asn Tyr Gln Arg Phe Thr Ile Asp Lys Tyr Leu Lys Arg Tyr Glu
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Lys Ala Ile Gly His Leu Ser Lys Cys Gly Pro Glu Tyr Phe Pro Glu
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Cys Leu Asn Leu Ile Lys Asp Lys Asn Leu Tyr Asn Glu Ala Leu Lys
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Leu Tyr Ser Pro Ser Ser Gln Gln Tyr Gln Asp Ile Ser Ile Ala Tyr
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Gly Glu His Leu Met Gln Glu His Met Tyr Glu Pro Ala Gly Leu Met
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Phe Ala Arg Cys Gly Ala His Glu Lys Ala Leu Ser Ala Phe Leu Thr
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Cys Gly Asn Trp Lys Gln Ala Leu Cys Val Ala Ala Gln Leu Asn Phe
1025              1030              1035              1040

Thr Lys Asp Gln Leu Val Gly Leu Gly Arg Thr Leu Ala Gly Lys Leu
              1045              1050              1055

**Page 23**

Val Glu Gln Arg Lys His Ile Asp Ala Ala Met Val Leu Glu Glu Ser
            1060                1065                1070

Ala Gln Asp Tyr Glu Glu Ala Val Leu Leu Leu Leu Glu Gly Ala Ala
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Trp Glu Glu Ala Leu Arg Leu Val Tyr Lys Tyr Asn Arg Leu Asp Ile
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Ile Glu Thr Asn Val Lys Pro Ser Ile Leu Glu Ala Gln Lys Asn Tyr
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Met Ala Phe Leu Asp Ser Gln Thr Ala Thr Phe Ser Arg His Lys Lys
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Arg Leu Leu Val Val Arg Glu Leu Lys Glu Gln Ala Gln Gln Ala Gly
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Leu Asp Asp Glu Val Pro His Gly Gln Glu Ser Asp Leu Phe Ser Glu
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Thr Ser Ser Val Val Ser Gly Ser Glu Met Ser Gly Lys Tyr Ser His
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Ser Asn Ser Arg Ile Ser Ala Arg Ser Ser Lys Asn Arg Arg Lys Ala
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Glu Arg Lys Lys His Ser Leu Lys Glu Gly Ser Pro Leu Glu Asp Leu
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Ala Leu Leu Glu Ala Leu Ser Glu Val Val Gln Asn Thr Glu Asn Leu
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Lys Asp Glu Val Tyr His Ile Leu Lys Val Leu Phe Leu Phe Glu Phe
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Asp Glu Gln Gly Arg Glu Leu Gln Lys Ala Phe Glu Asp Thr Leu Gln
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Leu Met Glu Arg Ser Leu Pro Glu Ile Trp Thr Leu Thr Tyr Gln Gln
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Asn Ser Ala Thr Pro Val Leu Gly Pro Asn Ser Thr Ala Asn Ser Ile
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Met Ala Ser Tyr Gln Gln Gln Lys Thr Ser Val Pro Val Leu Asp Ala
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Ser Leu Leu Asp
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Val Leu Ile Gly Ser Glu Arg Gly Leu Thr Glu Val Asp Pro Val Arg
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Arg Glu Val Lys Thr Glu Ile Ser Leu Val Ala Glu Gly Phe Leu Pro
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Glu Asp Gly Ser Gly Cys Ile Val Gly Ile Gln Asp Leu Leu Asp Gln
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Glu Ser Val Cys Val Ala Thr Ala Ser Gly Asp Val Ile Val Cys Asn
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Leu Ser Thr Gln Gln Leu Glu Cys Val Gly Ser Val Ala Ser Gly Ile
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Ser Val Met Ser Trp Ser Pro Asp Gln Glu Leu Leu Leu Leu Ala Thr
           115             120                 125

Ala Gln Gln Thr Leu Ile Met Met Thr Lys Asp Phe Glu Val Ile Ala
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Glu Glu Gln Ile His Gln Asp Asp Phe Gly Glu Gly Lys Phe Val Thr
145                 150                 155                 160

Val Gly Trp Gly Ser Lys Gln Thr Gln Phe His Gly Ser Glu Gly Arg
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Pro Thr Ala Phe Pro Val Gln Leu Pro Glu Asn Ala Leu Pro Trp Asp
           180                 185                 190

Asp Arg Arg Pro His Ile Thr Trp Arg Gly Asp Gly Gln Tyr Phe Ala
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Val Ser Val Val Cys Arg Gln Thr Glu Ala Arg Lys Ile Arg Val Trp
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Asn Arg Glu Phe Ala Leu Gln Ser Thr Ser Glu Ser Val Pro Gly Leu
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Gly Pro Ala Leu Ala Trp Lys Pro Ser Gly Ser Leu Ile Ala Ser Thr
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Gln Asp Lys Pro Asn Gln Gln Asp Val Val Phe Phe Glu Lys Asn Gly
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Leu Leu His Gly His Phe Thr Leu Pro Phe Leu Lys Asp Glu Val Lys
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Val Asn Asp Leu Leu Trp Asn Ala Asp Ser Ser Val Leu Ala Ile Trp
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Leu Glu Asp Leu Pro Lys Glu Asp Ser Ser Thr Leu Lys Ser Tyr Val
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Gln Leu Trp Thr Val Gly Asn Tyr His Trp Tyr Leu Lys Gln Ser Leu
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Page 25

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Pro Phe Ser Thr Thr Gly Lys Asn Gln Ile Val Ser Leu Leu Trp Asp
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Arg Leu Leu Ile Pro His Pro Val Asn Gln Val Ile Phe Ser Ala His
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            740                    745                    750
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Leu Leu Leu Leu Val Asp Val Asn Glu Leu Phe Asn His Ser Leu Gly
                    885                    890                      895

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            900                    905                    910
Asp Pro Lys Glu Tyr Leu Pro Phe Leu Asn Thr Leu Lys Lys Met Glu
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    930                    935                    940
Lys Ala Leu Gly His Leu Ser Lys Cys Gly Pro Glu Tyr Phe Thr Glu
945                    950                    955                      960
Cys Leu Asn Leu Ile Lys Asp Lys Asn Leu Tyr Lys Glu Ala Leu Lys
            965                    970                      975
Leu Tyr Arg Pro Asp Ser Pro Gln Tyr Gln Ala Val Ser Met Ala Tyr
            980                    985                      990
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Gly Glu His Leu Met Gln Glu His Leu Tyr Glu Pro Ala Gly Leu Val
    995                1000                1005

Phe Ala Arg Cys Gly Ala Gln Glu Lys Ala Leu Glu Ala Phe Leu Ala
    1010               1015               1020

Cys Gly Ser Trp Gln Gln Ala Leu Cys Val Ala Ala Gln Leu Gln Met
1025               1030               1035               1040

Ser Lys Asp Lys Val Ala Gly Leu Ala Arg Thr Leu Ala Gly Lys Leu
              1045               1050               1055

Val Glu Gln Arg Lys His Ser Glu Ala Ala Thr Val Leu Glu Gln Tyr
              1060               1065               1070

Ala Gln Asp Tyr Glu Glu Ala Val Leu Leu Leu Leu Glu Gly Ser Ala
              1075               1080               1085

Trp Glu Glu Ala Leu Arg Leu Val Tyr Lys Tyr Asp Arg Val Asp Ile
    1090               1095               1100

Ile Glu Thr Ser Ile Lys Pro Ser Ile Leu Glu Ala Gln Lys Asn Tyr
1105               1110               1115               1120

Met Asp Phe Leu Asp Ser Glu Thr Ala Thr Phe Ile Arg His Lys Asn
              1125               1130               1135

Arg Leu Gln Val Val Arg Ala Leu Arg Arg Gln Ala Pro Gln Val His
              1140               1145               1150

Val Asp His Glu Val Ala His Gly Pro Glu Ser Asp Leu Phe Ser Glu
    1155               1160               1165

Thr Ser Ser Ile Met Ser Gly Ser Glu Met Ser Gly Arg Tyr Ser His
    1170               1175               1180

Ser Asn Ser Arg Ile Ser Ala Arg Ser Ser Lys Asn Arg Arg Lys Ala
1185               1190               1195               1200

Glu Arg Lys Lys His Ser Leu Lys Glu Gly Ser Pro Leu Glu Gly Leu
              1205               1210               1215

Ala Leu Leu Glu Ala Leu Ser Glu Val Val Gln Ser Val Glu Lys Leu
              1220               1225               1230

Lys Asp Glu Val Arg Ala Ile Leu Lys Val Leu Phe Leu Phe Glu Phe
              1235               1240               1245

Glu Glu Gln Ala Lys Glu Leu Gln Arg Ala Phe Glu Ser Thr Leu Gln
    1250               1255               1260

Leu Met Glu Arg Ala Val Pro Glu Ile Trp Thr Pro Ala Gly Gln Gln
1265               1270               1275               1280

Ser Ser Thr Thr Pro Val Leu Gly Pro Ser Ser Thr Ala Asn Ser Ile
              1285               1290               1295

Thr Ala Ser Tyr Gln Gln Gln Lys Thr Cys Val Pro Ala Leu Asp Ala
              1300               1305               1310

Gly Val Tyr Met Pro Pro Lys Met Asp Pro Arg Ser Gln Trp Lys Leu
    1315               1320               1325

Ser Leu Leu Glu
    1330


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<213> Homo sapiens

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Gly Pro Gly Asn Pro Gln Cys Phe Ser Leu Arg Thr Glu Gln Gly Thr
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Val Leu Ile Gly Ser Glu His Gly Leu Ile Glu Val Asp Pro Val Ser
            35                  40                  45

Arg Glu Val Lys Asn Glu Val Ser Leu Val Ala Glu Gly Phe Leu Pro
        50                  55                  60

Glu Asp Gly Ser Gly Arg Ile Val Gly Val Gln Asp Leu Leu Asp Gln
 65                  70                  75                  80

Glu Ser Val Cys Val Ala Thr Ala Ser Gly Asp Val Ile Leu Cys Ser
                85                  90                  95

Leu Ser Thr Gln Gln Leu Glu Cys Val Gly Ser Val Ala Ser Gly Ile
            100                 105                 110

Ser Val Met Ser Trp Ser Pro Asp Gln Glu Leu Val Leu Leu Ala Thr
            115                 120                 125

Gly Gln Gln Thr Leu Ile Met Met Thr Lys Asp Phe Glu Pro Ile Leu
    130                 135                 140

Glu Gln Gln Ile His Gln Asp Asp Phe Gly Glu Ser Lys Phe Ile Thr
145                 150                 155                 160

Val Gly Trp Gly Arg Lys Glu Thr Gln Phe His Gly Ser Glu Gly Arg
                165                 170                 175

Gln Ala Ala Phe Gln Met Gln Met His Glu Ser Ala Leu Pro Trp Asp
                180                 185                 190

Asp His Arg Pro Gln Val Thr Trp Arg Gly Asp Gly Gln Phe Phe Ala
            195                 200                 205

Val Ser Val Val Cys Pro Glu Thr Gly Ala Arg Lys Val Arg Val Trp
    210                 215                 220

Asn Arg Glu Phe Ala Leu Gln Ser Thr Ser Glu Pro Val Ala Gly Leu
225                 230                 235                 240

Gly Pro Ala Leu Ala Trp Lys Pro Ser Gly Ser Leu Ile Ala Ser Thr
                245                 250                 255

Gln Asp Lys Pro Asn Gln Gln Asp Ile Val Phe Phe Glu Lys Asn Gly
            260                 265                 270

Leu Leu His Gly His Phe Thr Leu Pro Phe Leu Lys Asp Glu Val Lys

                275                  280                    285
Val Asn Asp Leu Leu Trp Asn Ala Asp Ser Ser Val Leu Ala Val Trp
    290                  295                  300

Leu Glu Asp Leu Gln Arg Glu Glu Ser Ser Ile Pro Lys Thr Cys Val
305                  310                  315                  320

Gln Leu Trp Thr Val Gly Asn Tyr His Trp Tyr Leu Lys Gln Ser Leu
                325                  330                  335

Ser Phe Ser Thr Cys Gly Lys Ser Lys Ile Val Ser Leu Met Trp Asp
            340                  345                  350

Pro Val Thr Pro Tyr Arg Leu His Val Leu Cys Gln Gly Trp His Tyr
            355                  360                  365

Leu Ala Tyr Asp Trp His Trp Thr Thr Asp Arg Ser Val Gly Asp Asn
    370                  375                  380

Ser Ser Asp Leu Ser Asn Val Ala Val Ile Asp Gly Asn Arg Val Leu
385                  390                  395                  400

Val Thr Val Phe Arg Gln Thr Val Val Pro Pro Met Cys Thr Tyr
                405                  410                  415

Gln Leu Leu Phe Pro His Pro Val Asn Gln Val Thr Phe Leu Ala His
            420                  425                  430


Pro Gln Lys Ser Asn Asp Leu Ala Val Leu Asp Ala Ser Asn Gln Ile
        435                  440                  445

Ser Val Tyr Lys Cys Gly Asp Cys Pro Ser Ala Asp Pro Thr Val Lys
    450                  455                  460

Leu Gly Ala Val Gly Gly Ser Gly Phe Lys Val Cys Leu Arg Thr Pro
465                  470                  475                  480

His Leu Glu Lys Arg Tyr Lys Ile Gln Phe Glu Asn Asn Glu Asp Gln
                485                  490                  495

Asp Val Asn Pro Leu Lys Leu Gly Leu Leu Thr Trp Ile Glu Glu Asp
            500                  505                  510

Val Phe Leu Ala Val Ser His Ser Glu Phe Ser Pro Arg Ser Val Ile
        515                  520                  525

His His Leu Thr Ala Ala Ser Ser Glu Met Asp Glu Glu His Gly Gln
    530                  535                  540

Leu Asn Val Ser Ser Ser Ala Ala Val Asp Gly Val Ile Ile Ser Leu
545                  550                  555                  560

Cys Cys Asn Ser Lys Thr Lys Ser Val Val Leu Gln Leu Ala Asp Gly
            565                  570                  575

Gln Ile Phe Lys Tyr Leu Trp Glu Ser Pro Ser Leu Ala Ile Lys Pro
            580                  585                  590

Trp Lys Asn Ser Gly Gly Phe Pro Val Arg Phe Pro Tyr Pro Cys Thr
    595                  600                  605

Page 30

Gln Thr Glu Leu Ala Met Ile Gly Glu Glu Glu Cys Val Leu Gly Leu
610                     615             620

Thr Asp Arg Cys Arg Phe Phe Ile Asn Asp Ile Glu Val Ala Ser Asn
625             630             635                     640

Ile Thr Ser Phe Ala Val Tyr Asp Glu Phe Leu Leu Leu Thr Thr His
                645             650                 655

Ser His Thr Cys Gln Cys Phe Cys Leu Arg Asp Ala Ser Phe Lys Thr
            660             665             670

Leu Gln Ala Gly Leu Ser Ser Asn His Val Ser His Gly Glu Val Leu
        675             680             685

Arg Lys Val Glu Arg Gly Ser Arg Ile Val Thr Val Val Pro Gln Asp
    690             695             700

Thr Lys Leu Val Leu Gln Met Pro Arg Gly Asn Leu Glu Val Val His
705             710             715                     720

His Arg Ala Leu Val Leu Ala Gln Ile Arg Lys Trp Leu Asp Lys Leu
            725             730             735


Met Phe Lys Glu Ala Phe Glu Cys Met Arg Lys Leu Arg Ile Asn Leu
        740             745             750

Asn Leu Ile Tyr Asp His Asn Pro Lys Val Phe Leu Gly Asn Val Glu
        755             760             765

Thr Phe Ile Lys Gln Ile Asp Ser Val Asn His Ile Asn Leu Phe Phe
    770             775             780

Thr Glu Leu Lys Glu Glu Asp Val Thr Lys Thr Met Tyr Pro Ala Pro
785             790             795                     800

Val Thr Ser Ser Val Tyr Leu Ser Arg Asp Pro Asp Gly Asn Lys Ile
            805             810             815

Asp Leu Val Cys Asp Ala Met Arg Ala Val Met Glu Ser Ile Asn Pro
            820             825             830

His Lys Tyr Cys Leu Ser Ile Leu Thr Ser His Val Lys Lys Thr Thr
        835             840             845

Pro Glu Leu Glu Ile Val Leu Gln Lys Val His Glu Leu Gln Gly Asn
    850             855             860

Ala Pro Ser Asp Pro Asp Ala Val Ser Ala Glu Glu Ala Leu Lys Tyr
865             870             875                     880

Leu Leu His Leu Val Asp Val Asn Glu Leu Tyr Asp His Ser Leu Gly
            885             890             895

Thr Tyr Asp Phe Asp Leu Val Leu Met Val Ala Glu Lys Ser Gln Lys
        900             905             910

Asp Pro Lys Glu Tyr Leu Pro Phe Leu Asn Thr Leu Lys Lys Met Glu
    915             920             925

Thr Asn Tyr Gln Arg Phe Thr Ile Asp Lys Tyr Leu Lys Arg Tyr Glu
930             935             940

Lys Ala Ile Gly His Leu Ser Lys Cys Gly Pro Glu Tyr Phe Pro Glu
945              950              955              960

Cys Leu Asn Leu Ile Lys Asp Lys Asn Leu Tyr Asn Glu Ala Leu Lys
              965              970              975

Leu Tyr Ser Pro Ser Ser Gln Gln Tyr Gln Asp Ile Ser Ile Ala Tyr
              980              985              990

Gly Glu His Leu Met Gln Glu His Met Tyr Glu Pro Ala Gly Leu Met
         995              1000              1005

Phe Ala Arg Cys Gly Ala His Glu Lys Ala Leu Ser Ala Phe Leu Thr
    1010              1015              1020

Cys Gly Asn Trp Lys Gln Ala Leu Cys Val Ala Ala Gln Leu Asn Phe
1025              1030              1035              1040

Thr Lys Asp Gln Leu Val Gly Leu Gly Arg Thr Leu Ala Gly Lys Leu
              1045              1050              1055

Val Glu Gln Arg Lys His Ile Asp Ala Ala Met Val Leu Glu Glu Ser
              1060              1065              1070

Ala Gln Asp Tyr Glu Glu Ala Val Leu Leu Leu Leu Glu Gly Ala Ala
         1075              1080              1085

Trp Glu Glu Ala Leu Arg Leu Val Tyr Lys Tyr Asn Arg Leu Asp Ile
    1090              1095              1100

Ile Glu Thr Asn Val Lys Pro Ser Ile Leu Glu Ala Gln Lys Asn Tyr
1105              1110              1115              1120

Met Ala Phe Leu Asp Ser Gln Thr Ala Thr Phe Ser Arg His Lys Lys
              1125              1130              1135

Arg Leu Leu Val Val Arg Glu Leu Lys Glu Gln Ala Gln Gln Ala Gly
         1140              1145              1150

Leu Asp Asp Glu Val Pro His Gly Gln Glu Ser Asp Leu Phe Ser Glu
    1155              1160              1165

Thr Ser Ser Val Val Ser Gly Ser Glu Met Ser Gly Lys Tyr Ser His
    1170              1175              1180

Ser Asn Ser Arg Ile Ser Ala Arg Ser Ser Lys Asn Arg Arg Lys Ala
1185              1190              1195              1200

Glu Arg Lys Lys His Ser Leu Lys Glu Gly Ser Pro Leu Glu Asp Leu
         1205              1210              1215

Ala Leu Leu Glu Ala Leu Ser Glu Val Val Gln Asn Thr Glu Asn Leu
         1220              1225              1230

Lys Asp Glu Val Tyr His Ile Leu Lys Val Leu Phe Leu Phe Glu Phe
    1235              1240              1245

Asp Glu Gln Gly Arg Glu Leu Gln Lys Ala Phe Glu Asp Thr Leu Gln
    1250              1255              1260

Leu Met Glu Arg Ser Leu Pro Glu Ile Trp Thr Leu Thr Tyr Gln Gln

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1265            1270            1275            1280
Asn Ser Ala Thr Pro Val Leu Gly Pro Asn Ser Thr Ala Asn Ser Ile
                1285            1290            1295
Met Ala Ser Tyr Gln Gln Gln Lys Thr Ser Val Pro Val Leu Asp Ala
                1300            1305            1310
Glu Leu Phe Ile Pro Pro Lys Ile Asn Arg Arg Thr Gln Trp Lys Leu
        1315            1320            1325
Ser Leu Leu Asp
     1330
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Met Arg Asn Leu Lys Leu Arg Tyr Cys Lys Glu Leu Asn Ala Val Ala
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His Pro Gln His Leu Leu Leu Gln Pro Glu Leu Asn Gly Gly Ala Ser
           20              25              30
Asp Ile Tyr Phe Val Val Ala Asp Asn Lys Thr Tyr Ala Val Gln Glu
        35              40              45
Ser Gly Asp Val Arg Leu Lys Val Ile Ala Asp Leu Pro Asp Ile Val
     50              55              60
Gly Val Glu Phe Leu Gln Leu Asp Asn Ala Ile Cys Val Ala Ser Gly
 65              70              75              80
Ala Gly Glu Val Ile Leu Val Asp Pro Gln Thr Gly Ala Thr Ser Glu
                85              90              95
Gly Thr Phe Cys Asp Val Gly Ile Glu Ser Met Ala Trp Ser Pro Asn
            100             105             110
Gln Glu Val Val Ala Phe Val Thr Arg Thr His Asn Val Val Leu Met
        115             120             125
Thr Ser Thr Phe Asp Val Ile Ala Glu Gln Pro Leu Asp Ala Glu Leu
    130             135             140
Asp Pro Asp Gln Gln Phe Val Asn Val Gly Trp Gly Lys Lys Glu Thr
145             150             155             160
Gln Phe His Gly Ser Glu Gly Lys Gln Ala Ala Lys Gln Lys Glu Ser
            165             170             175
Asp Ser Thr Phe Thr Arg Asp Glu Gln Glu Leu Asn Gln Asp Val Ser
            180             185             190
Ile Ser Trp Arg Gly Asp Gly Glu Phe Phe Val Val Ser Tyr Val Ala
        195             200             205
Ala Gln Leu Gly Arg Thr Phe Lys Val Tyr Asp Ser Glu Gly Lys Leu
    210             215             220
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Asn His Thr Ala Glu Lys Ser Ala Asn Leu Lys Asp Ser Val Val Trp
225              230              235                  240

Arg Pro Thr Gly Asn Trp Ile Ala Val Pro Gln Gln Phe Pro Asn Lys
             245              250              255

Ser Thr Ile Ala Leu Phe Glu Lys Asn Gly Leu Arg His Arg Glu Leu
             260              265              270

Val Leu Pro Phe Asp Leu Gln Glu Glu Pro Val Val Gln Leu Arg Trp
         275              280              285

Ser Glu Asp Ser Asp Ile Leu Ala Ile Arg Thr Cys Ala Lys Glu Glu
    290              295              300

Gln Arg Val Tyr Leu Tyr Thr Ile Gly Asn Tyr His Trp Tyr Leu Lys
305              310              315                  320

Gln Val Leu Ile Phe Glu Gln Ala Asp Pro Leu Ala Leu Leu His Trp
             325              330              335

Asp Thr Arg Cys Gly Ala Glu His Thr Leu His Val Leu Lys Glu Ser
             340              345              350

Gly Lys His Leu Val Tyr Arg Trp Ala Phe Ala Val Asp Arg Asn Asn
             355              360              365

Ser Ile Val Gly Val Ile Asp Gly Lys Arg Leu Leu Leu Thr Asp Phe
    370              375              380

Asp Glu Ala Ile Val Pro Pro Pro Met Ser Lys Glu Leu Gln Lys Pro
385              390              395                  400

Ile Met Leu Met Pro Asp Ala Glu Leu Ser Gly Leu His Leu Ala Asn
             405              410              415

Leu Thr His Phe Ser Pro His Tyr Leu Leu Ala Thr His Ser Ser Ala
             420              425              430

Gly Ser Thr Arg Leu Leu Leu Ser Tyr Lys Asp Asn Asp Asn Lys
             435              440              445

Pro Gly Glu Trp Phe Tyr Arg Val His Ser Ser Val Arg Ile Asn Gly
    450              455              460

Leu Val Asn Ala Val Ala Val Ala Pro Tyr Ala Met Asn Glu Phe Tyr
465              470              475                  480

Val Gln Thr Val Asn Asn Gly His Thr Tyr Glu Val Ser Leu Lys Ala
             485              490              495

Asp Lys Thr Leu Lys Val Glu Arg Ser Tyr Val Gln Leu His Glu Pro
             500              505              510

Ala Asp Gln Ile Asp Trp Val Ile Val Lys Gly Cys Ile Trp Asp Gly
             515              520              525

Tyr Thr Gly Ala Leu Val Thr Leu Arg Asn Gln His Leu Leu His Ile
    530              535              540

Asp Gly Tyr Arg Ile Gly Glu Asp Val Thr Ser Phe Cys Val Val Thr
545              550              555                  560
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Asn Tyr Leu Val Tyr Thr Gln Leu Asn Ala Met His Phe Val Gln Leu
            565               570               575

Asp Asp Arg Arg Gln Val Ala Ser Arg Asn Ile Glu Arg Gly Ala Lys
            580               585               590

Ile Val Thr Ala Val Ala Arg Lys Ala Arg Val Val Leu Gln Leu Pro
            595               600               605

Arg Gly Asn Leu Glu Ala Ile Cys Pro Arg Val Leu Val Leu Glu Leu
    610               615               620

Val Gly Asp Leu Leu Glu Arg Gly Lys Tyr Gln Lys Ala Ile Glu Met
625               630               635               640

Ser Arg Lys Gln Arg Ile Asn Leu Asn Ile Ile Phe Asp His Asp Val
            645               650               655

Lys Arg Phe Val Ser Ser Val Gly Ala Phe Leu Asn Asp Ile Asn Glu
            660               665               670

Pro Gln Trp Leu Cys Leu Phe Leu Ser Glu Leu Gln Asn Glu Asp Phe
            675               680               685

Thr Lys Gly Met Tyr Ser Ser Asn Tyr Asp Ala Ser Lys Gln Thr Tyr
    690               695               700

Pro Ser Asp Tyr Arg Val Asp Gln Lys Val Phe Tyr Val Cys Arg Leu
705               710               715               720

Leu Glu Gln Gln Met Asn Arg Phe Val Ser Arg Phe Arg Leu Pro Leu
            725               730               735

Ile Thr Ala Tyr Val Lys Leu Gly Cys Leu Glu Met Ala Leu Gln Val
            740               745               750

Ile Trp Lys Glu Gln Gln Glu Asp Ala Ser Leu Ala Asp Gln Leu Leu
            755               760               765

Gln His Leu Leu Tyr Leu Val Asp Val Asn Asp Leu Tyr Asn Val Ala
    770               775               780

Leu Gly Thr Tyr Asp Phe Gly Leu Val Leu Phe Val Ala Gln Lys Ser
785               790               795               800

Gln Lys Asp Pro Lys Glu Phe Leu Pro Tyr Leu Asn Asp Leu Lys Ala
            805               810               815

Leu Pro Ile Asp Tyr Arg Lys Phe Arg Ile Asp Asp His Leu Lys Arg
            820               825               830

Tyr Thr Ser Ala Leu Ser His Leu Ala Ala Cys Gly Glu Gln His Tyr
            835               840               845

Glu Glu Ala Leu Glu Tyr Ile Arg Lys His Gly Leu Tyr Thr Asp Gly
    850               855               860

Leu Ala Phe Tyr Arg Glu His Ile Glu Phe Gln Lys Asn Ile Tyr Val
865               870               875               880
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Ala Tyr Ala Asp His Leu Arg Ala Ile Ala Lys Leu Asp Asn Ala Ser
                885                 890                 895

Leu Met Tyr Glu Arg Gly Gly Gln Leu Gln Gln Ala Leu Leu Ser Ala
                900             905                 910

Lys His Thr Leu Asp Trp Gln Arg Val Leu Val Leu Ala Lys Lys Leu
        915                 920                 925

Ser Glu Pro Leu Asp Gln Val Ala Gln Ser Leu Val Gly Pro Leu Gln
    930                 935                 940

Gln Gln Gly Arg His Met Glu Ala Tyr Glu Leu Val Lys Glu His Cys
945                 950                 955                 960

Gln Asp Arg Lys Arg Gln Phe Asp Val Leu Leu Glu Gly His Leu Tyr
                965                 970                 975

Ser Arg Ala Ile Tyr Glu Ala Gly Leu Glu Asp Asp Asp Val Ser Glu
                980                 985                 990

Lys Ile Ala Pro Ala Leu Leu Ala Tyr Gly Val Gln Leu Glu Ser Ser
            995             1000                1005

Leu Gln Ala Asp Leu Gln Leu Phe Leu Asp Tyr Lys Gln Arg Leu Leu
    1010                1015                1020

Asp Ile Arg Arg Asn Gln Ala Lys Ser Gly Glu Gly Tyr Ile Asp Thr
1025                1030                1035                1040

Asp Val Asn Leu Lys Glu Val Asp Leu Leu Ser Asp Thr Thr Ser Leu
            1045                1050                1055

His Ser Ser Gln Tyr Ser Gly Thr Ser Arg Arg Thr Gly Lys Thr Phe
            1060                1065                1070

Arg Ser Ser Lys Asn Arg Arg Lys His Glu Arg Lys Leu Phe Ser Leu
        1075                1080                1085

Lys Pro Gly Asn Pro Phe Glu Asp Ile Ala Leu Ile Asp Ala Leu His
    1090                1095                1100

Asn His Val Thr Lys Ile Ala Gln Gln Gln Pro Val Arg Asp Thr
1105                1110                1115                1120

Cys Lys Ala Leu Leu Gln Leu Ala Asn Ala Ala Asp Ala Asp Pro Leu
            1125                1130                1135

Ala Ala Ala Leu Gln Arg Glu Phe Lys Thr Leu Leu Gln Ala Val Asp
            1140                1145                1150

Ala Ala Leu Asp Glu Ile Trp Thr Pro Glu Leu Arg Gly Asn Gly Leu
        1155                1160                1165

Met Ala Asp His Leu Thr Gly Pro Asn Val Asp Tyr Leu Ala Leu Gln
    1170                1175                1180

Lys Glu Gln Arg Tyr Ala Leu Leu Ser Pro Leu Lys Arg Phe Lys Pro
1185                1190                1195                1200

Gln Leu Ile Met Met Asp Trp Gln His Glu Ile Leu Gln
        1205                1210
Page 36

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Asn Met Arg Asn Leu Ile Thr Leu Asn Lys Gly Lys Phe Lys Pro Thr
             20                  25                  30

Ala Ser Thr Ala Glu Gly Asp Glu Asp Asp Leu Ser Phe Thr Leu Leu
         35                  40                  45

Asp Ser Val Phe Asp Thr Leu Ser Asp Ser Ile Thr Cys Val Leu Gly
     50                  55                  60

Ser Thr Asp Ile Gly Ala Ile Glu Val Gln Gln Phe Met Lys Asp Gly
 65                  70                  75                  80

Ser Arg Asn Val Leu Ala Ser Phe Asn Ile Gln Thr Phe Asp Asp Lys
                 85                  90                  95

Leu Leu Ser Phe Val His Phe Ala Asp Ile Asn Gln Leu Val Phe Val
                100                 105                 110

Phe Glu Gln Gly Asp Ile Ile Thr Ala Thr Tyr Asp Pro Val Ser Leu
            115                 120                 125

Asp Pro Ala Glu Thr Leu Ile Glu Ile Met Gly Thr Ile Asp Asn Gly
    130                 135                 140

Ile Ala Ala Ala Gln Trp Ser Tyr Asp Glu Glu Thr Leu Ala Met Val
145                 150                 155                 160

Thr Lys Asp Arg Asn Val Val Val Leu Ser Lys Leu Phe Glu Pro Ile
                165                 170                 175

Ser Glu Tyr His Leu Glu Val Asp Asp Leu Lys Ile Ser Lys His Val
            180                 185                 190

Thr Val Gly Trp Gly Lys Lys Glu Thr Gln Phe Arg Gly Lys Gly Ala
        195                 200                 205

Arg Ala Met Glu Arg Glu Ala Leu Ala Ser Leu Lys Ala Ser Gly Leu
    210                 215                 220

Val Gly Asn Gln Leu Arg Asp Pro Thr Met Pro Tyr Met Val Asp Thr
225                 230                 235                 240

Gly Asp Val Thr Ala Leu Asp Ser His Glu Ile Thr Ile Ser Trp Arg
                245                 250                 255

Gly Asp Cys Asp Tyr Phe Ala Val Ser Ser Val Glu Glu Val Pro Asp
            260                 265                 270

Glu Asp Asp Glu Thr Lys Ser Ile Lys Arg Arg Ala Phe Arg Val Phe
    275                 280                 285

Ser Arg Glu Gly Gln Leu Asp Ser Ala Ser Glu Pro Val Thr Gly Met
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                          290                  295                  300
Glu His Gln Leu Ser Trp Lys Pro Gln Gly Ser Leu Ile Ala Ser Ile
305                      310                  315                  320

Gln Arg Lys Thr Asp Leu Gly Glu Glu Asp Ser Val Asp Val Ile Phe
                325                  330                  335

Phe Glu Arg Asn Gly Leu Arg His Gly Glu Phe Asp Thr Arg Leu Pro
                340                  345                  350

Leu Asp Glu Lys Val Glu Ser Val Cys Trp Asn Ser Asn Ser Glu Ala
            355                  360                  365

Leu Ala Val Val Leu Ala Asn Arg Ile Gln Leu Trp Thr Ser Lys Asn
    370                  375                  380

Tyr His Trp Tyr Leu Lys Gln Glu Leu Tyr Ala Ser Asp Ile Ser Tyr
385                  390                  395                  400

Val Lys Trp His Pro Glu Lys Asp Phe Thr Leu Met Phe Ser Asp Ala
                405                  410                  415

Gly Phe Ile Asn Ile Val Asp Phe Ala Tyr Lys Met Ala Gln Gly Pro
                420                  425                  430

Thr Leu Glu Pro Phe Asp Asn Gly Thr Ser Leu Val Val Asp Gly Arg
            435                  440                  445

Thr Val Asn Ile Thr Pro Leu Ala Leu Ala Asn Val Pro Pro Pro Met
    450                  455                  460

Tyr Tyr Arg Asp Phe Glu Thr Pro Gly Asn Val Leu Asp Val Ala Cys
465                  470                  475                  480

Ser Phe Ser Asn Glu Ile Tyr Ala Ala Ile Asn Lys Asp Val Leu Ile
                485                  490                  495

Phe Ala Ala Val Pro Ser Ile Glu Glu Met Lys Lys Gly Lys His Pro
                500                  505                  510

Ser Ile Val Cys Glu Phe Pro Lys Ser Glu Phe Thr Ser Glu Val Asp
            515                  520                  525

Ser Leu Arg Gln Val Ala Phe Ile Asn Asp Ser Ile Val Gly Val Leu
    530                  535                  540


Leu Asp Thr Asp Asn Leu Ser Arg Ile Ala Leu Leu Asp Ile Gln Asp
545                  550                  555                  560

Ile Thr Gln Pro Thr Leu Ile Thr Ile Val Glu Val Tyr Asp Lys Ile
                565                  570                  575

Val Leu Leu Ser Ser Asp Phe Asp Tyr Asn His Leu Val Tyr Glu Thr
                580                  585                  590

Arg Asp Gly Thr Val Cys Gln Leu Asp Ala Glu Gly Gln Leu Met Glu
            595                  600                  605

Ile Thr Lys Phe Pro Gln Leu Val Arg Asp Phe Arg Val Lys Arg Val
    610                  615                  620
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His Asn Thr Ser Ala Glu Asp Asp Asp Asn Trp Ser Ala Glu Ser Ser
625             630             635             640

Glu Leu Val Ala Phe Gly Ile Thr Asn Asn Gly Lys Leu Phe Ala Asn
            645             650             655

Gln Val Leu Leu Ala Ser Ala Val Thr Ser Leu Glu Ile Thr Asp Ser
        660             665             670

Phe Leu Leu Phe Thr Thr Ala Gln His Asn Leu Gln Phe Val His Leu
        675             680             685

Asn Ser Thr Asp Phe Lys Pro Leu Pro Leu Val Glu Glu Gly Val Glu
690             695             700

Asp Glu Arg Val Arg Ala Ile Glu Arg Gly Ser Ile Leu Val Ser Val
705             710             715             720

Ile Pro Ser Lys Arg Ser Val Val Leu Gln Ala Thr Arg Gly Asn Leu
            725             730             735

Glu Thr Ile Tyr Pro Arg Ile Met Val Leu Ala Glu Val Arg Lys Asn
            740             745             750

Ile Met Ala Lys Arg Tyr Lys Glu Ala Phe Ile Val Cys Arg Thr His
        755             760             765

Arg Ile Asn Leu Asp Ile Leu His Asp Tyr Ala Pro Glu Leu Phe Ile
770             775             780

Glu Asn Leu Glu Val Phe Ile Asn Gln Ile Gly Arg Val Asp Tyr Leu
785             790             795             800

Asn Leu Phe Ile Ser Cys Leu Ser Glu Asp Asp Val Thr Lys Thr Lys
            805             810             815

Tyr Lys Glu Thr Leu Tyr Ser Gly Ile Ser Lys Ser Phe Gly Met Glu
        820             825             830

Pro Ala Pro Leu Thr Glu Met Gln Ile Tyr Met Lys Lys Lys Met Phe
        835             840             845

Asp Pro Lys Thr Ser Lys Val Asn Lys Ile Cys Asp Ala Val Leu Asn
    850             855             860

Val Leu Leu Ser Asn Pro Glu Tyr Lys Lys Lys Tyr Leu Gln Thr Ile
865             870             875             880

Ile Thr Ala Tyr Ala Ser Gln Asn Pro Gln Asn Leu Ser Ala Ala Leu
            885             890             895

Lys Leu Ile Ser Glu Leu Glu Asn Ser Glu Glu Lys Asp Ser Cys Val
            900             905             910

Thr Tyr Leu Cys Phe Leu Gln Asp Val Asn Val Val Tyr Lys Ser Ala
        915             920             925

Leu Ser Leu Tyr Asp Val Ser Leu Ala Leu Leu Val Ala Gln Lys Ser
    930             935             940

Gln Met Asp Pro Arg Glu Tyr Leu Pro Phe Leu Gln Glu Leu Gln Asp
945             950             955             960
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Asn Glu Pro Leu Arg Arg Lys Phe Leu Ile Asp Asp Tyr Leu Gly Asn
          965                       970                     975

Tyr Glu Lys Ala Leu Glu His Leu Ser Glu Ile Asp Lys Asp Gly Asn
          980                      985                 990

Val Ser Glu Glu Val Ile Asp Tyr Val Glu Ser His Asp Leu Tyr Lys
      995                  1000                1005

His Gly Leu Ala Leu Tyr Arg Tyr Asp Ser Glu Lys Gln Asn Val Ile
   1010                 1015             1020

Tyr Asn Ile Tyr Ala Lys His Leu Ser Ser Asn Gln Met Tyr Thr Asp
1025            1030              1035           1040

Ala Ala Val Ala Tyr Glu Met Leu Gly Lys Leu Lys Glu Ala Met Gly
          1045              1050           1055

Ala Tyr Gln Ser Ala Lys Arg Trp Arg Glu Ala Met Ser Ile Ala Val
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Gln Lys Phe Pro Glu Glu Val Glu Ser Val Ala Glu Glu Leu Ile Ser
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Ser Leu Thr Phe Glu His Arg Tyr Val Asp Ala Ala Asp Ile Gln Leu
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Glu Tyr Leu Asp Asn Val Lys Glu Ala Val Ala Leu Tyr Cys Lys Ala
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Tyr Arg Tyr Asp Ile Ala Ser Leu Val Ala Ile Lys Ala Lys Lys Asp
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Glu Leu Leu Glu Glu Val Val Asp Pro Gly Leu Gly Glu Gly Phe Gly
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Ile Ile Ala Glu Leu Leu Ala Asp Cys Lys Gly Gln Ile Asn Ser Gln
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Leu Arg Arg Leu Arg Glu Leu Arg Ala Lys Lys Glu Glu Asn Pro Tyr
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Ala Phe Tyr Gly Gln Glu Thr Glu Gln Ala Asp Asp Val Ser Val Ala
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Pro Ser Glu Thr Ser Thr Gln Glu Ser Phe Phe Thr Arg Tyr Thr Gly
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Lys Thr Gly Gly Thr Ala Lys Thr Gly Ala Ser Arg Arg Thr Ala Lys
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Asn Lys Arg Arg Glu Glu Arg Lys Arg Ala Arg Gly Lys Lys Gly Thr
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Ile Tyr Glu Glu Glu Tyr Leu Val Gln Ser Val Gly Arg Leu Ile Glu
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Arg Leu Asn Gln Thr Lys Pro Asp Ala Val Arg Val Val Glu Gly Leu
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Cys Arg Arg Asn Met Arg Glu Gln Ala His Gln Ile Gln Lys Asn Phe

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Ile Ser Glu Lys Asp Arg Glu Arg Val Asn Glu Asn Gly Glu Val Tyr
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Val Glu Val Cys Ser Ile Asp Ile Glu Pro Gly Asp Phe Ile Thr Ala
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Phe Asp Tyr Leu Ala Glu Lys Glu Ser Leu Leu Ile Gly Thr Ser His
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Gly Leu Leu Leu Val His Asn Val Glu Ser Asp Val Thr Glu Leu Val
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Gly Asn Ile Glu Gly Gly Val Lys Cys Ile Ser Pro Asn Pro Thr Gly
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Tyr Asp Trp Ala Leu Met Tyr Glu Lys Ala Leu Gly Glu Val Pro Glu
145             150                 155                 160

Gly Gly Tyr Val Arg Glu Thr Asn Asp Leu Ser Val Asn Cys Gly Gly
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Ile Ser Ile Ser Trp Arg Gly Asp Gly Lys Tyr Phe Ala Thr Met Gly
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Glu Val Tyr Glu Ser Gly Cys Met Ser Lys Lys Ile Lys Ile Trp Glu
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Leu Ile Cys Trp Thr Leu Ser Gly Gln Val Ser Val Arg His Phe Met
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Trp Val Thr Ala Val Met Glu Asp Ser Thr Ala Phe Val Ile Asp Asn
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Asp Thr Lys Asp Val Leu Asn Gly Asp Val Ala Leu Gly Asn Val Phe
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Phe Val Ile Asp Gly Arg Arg Arg Asp Glu Glu Asn Met Ser Tyr Val
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Ser Leu Met His Phe Lys Ile Asp Ile Lys Leu Gln Arg Phe Asp Ser
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Ala Leu Arg Asn Ile Val Ser Ala Gly Val Gly Tyr Phe Pro Asp Cys
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Met Asn Leu Ile Lys Lys Asn Pro Gln Leu Phe Pro Leu Gly Leu Leu
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Leu Ile Thr Asp Pro Glu Lys Lys Leu Val Val Leu Glu Ala Trp Ala
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Asp His Leu Ile Asp Glu Lys Arg Phe Glu Asp Ala Ala Thr Thr Tyr
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Ser Asp Ile Ser Gly Gly Ile Ser Leu Leu Ile Asn Ala Arg Glu Trp
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Gly Glu Glu Met Ala Leu Val Asp His Leu Lys Gly Met Arg Met Thr
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Asp Gly Gly Lys Arg Glu Leu Lys Ser Leu Leu Ile Cys Leu Val Thr
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Ser Tyr Val Val Lys Trp Pro Ala Asn Gln Ile Glu Asp Arg Arg Ile
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Ile Glu Lys Ile Glu Trp Asn Ser Thr Gly Thr Ile Leu Ser Met Gln
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Thr Ser Leu Gly Lys Lys His Gln Leu Glu Phe Trp His Leu Ser Asn
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Tyr Glu Phe Thr Arg Lys Cys Tyr Trp Lys Phe Ser Glu Ser Ile Ile
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Trp Lys Trp Ser Thr Val Glu Cys Gln Asn Ile Glu Val Leu Leu Glu
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Ser Gly Gln Phe Phe Ser Val His Ile Thr Pro Thr Ala Ser Phe Ser
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Asp Val Ile Ser Gln Asn Val Val Val Ala Thr Asp Glu Leu Arg Met
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Tyr Ser Leu Cys Arg Arg Val Val Pro Pro Pro Met Cys Asp Tyr Ser
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Ile Gln Cys Leu Ser Asp Ile Val Ala Tyr Thr Thr Ser Thr His His
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Val His Val Ile Thr Ser Asp Trp Lys Ile Ile Ser Cys Met Leu Phe
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Phe Lys Lys Lys Lys Arg Asn Tyr Ser Asn Pro Phe Phe Arg Lys Lys
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Tyr Ile Leu Glu Ile Leu Lys Val Pro Ser His Lys Thr Tyr Phe Ala
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Cys Phe Ala Val Ser Gln Asp Thr Asp Gly Tyr Lys Phe Asn Ser Asp
465                    470                    475                    480

Arg Ala Ser Ile Asp Glu Val Leu His Thr Glu Val Thr Glu Gly Ile
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Ile Cys Gly Phe Val Tyr Asp Glu Pro Ser Glu Ser Tyr Ile Ile Trp
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Asn Val Ser His Gly Lys His Gln Ile Ser Arg Val Gly Ala Asn Pro
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Page 46

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Leu Asn Thr Lys Glu Glu Leu Phe Lys Ile Asp Lys Phe Glu Ser Thr
                565             570             575

Glu Val His Phe Ile Gln Val Cys His Gly Ile Leu Asn His His Val
            580             585             590

Ile Gln Val Asp Asn Ser Met Leu Phe Leu Asp Ser Glu Arg Val Ser
        595             600             605

Gln Asp Ala Ile Ser Ile Leu Thr Arg Gly Ser Asp Ile Leu Leu Ile
    610             615             620

Asp Phe Asp Asn Lys Leu Arg Phe Ile Asp Ala Glu Ser Gly Lys Thr
625             630             635                         640

Leu Glu Asp Val Arg Asn Val Glu Ala Gly Cys Glu Leu Val Ala Cys
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Asp Ser Gln Ser Ala Asn Val Ile Leu Gln Ala Ala Arg Gly Asn Leu
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Glu Thr Ile Gln Pro Arg Arg Tyr Val Met Ala His Thr Arg Asp Leu
        675             680             685

Leu Asp Arg Lys Glu Tyr Ile Ala Ser Phe Lys Trp Met Lys Lys His
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Arg Val Asp Met Ser Phe Ala Met Lys Tyr Lys Gly Asp Asp Leu Glu
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Asp Asp Ile Pro Ile Trp Leu Lys Thr Ser Asn Asp Ser Gln Phe Leu
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Glu Gln Leu Leu Ile Ser Cys Thr Glu Val Phe Glu Asp Ala Gly Ser
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Ser Leu Cys Met Thr Val Ala Arg Tyr Val Arg Asp Leu Ser Asp Ala
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Glu Lys Thr Lys Met Phe Pro Leu Leu Leu Thr Ala Leu Leu Ser Ala
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Arg Ser Lys Pro Ser Lys Val Asn Asp Cys Leu Lys Glu Val Gln Glu
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His Val Glu Lys Ile Ala Asp Arg Lys Asp Val Phe Thr Arg Asn Ser
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Leu His His Ile Ser Phe Phe Val Pro Ala Lys Glu Leu Phe Asn Cys
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Ala Leu Ser Thr Tyr Asp Leu Lys Leu Ala Gln Gln Val Ala Glu Ala
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Lys Glu Arg Gly Ser Glu Glu Thr Trp Trp Asn Asp Ile Glu Asp Ile
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Ile Ile Gln Arg Glu Lys Leu Tyr Gln Asp Ala Leu Thr Leu Val Lys
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Pro Gly Asp Arg Arg Tyr Lys Gln Cys Cys Glu Leu Tyr Ala Glu Leu
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Lys Val Ser Met Ala Ser Thr Val Arg Arg Lys Gln Ile Glu Lys Lys
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